UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,562	03/21/2001	Tadahiro Uehara	826.1705/JDH	2631

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
ZHEN, LI B

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/812,562	Applicant(s) UEHARA ET AL.
	Examiner Li B. Zhen	Art Unit 2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 February 2003</u>.

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 17 are pending in the application.

Response to Arguments

2.   Applicant's arguments with respect to claims 1 - 17 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1 – 17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent NO. 6,016,495 to McKeehan.

5.   As to claim 1, McKeehan teaches an object managing apparatus managing an

object [object-oriented framework mechanism for persistent storage environment; col. 2,

lines 55 – 67] used by an application program including one or more components

[application programs 822, objects 824, Fig. 8; col. 15, line 65 – col. 16, line 12], in a

component base that is a base for configuring and executing the application program

[PersistentContainer is an extensible abstract class that allows a framework consumer

to define a new type of persistent container through appropriate subclassing; col. 18, lines 48 – 67] and provides each component with an external storage access function [method 900 for handling requests to access persistent objects; col. 17, lines 38 – 65], comprising:

a selecting device [ContainerClassConfig] selecting an object managing method [CacheManager; col. 20, lines 13 – 29] suitable for a type of a component [ContainerClassConfig is an abstract extensible class that defines configuration data for classes within a container. It is used to determine which classes a container supports; col. 20, lines 40 – 60], from a plurality of object managing methods that are prepared in advance [a class definition defines how an object acts and reacts to other objects by defining an operation or set of operations that is/are performed on the defined data; col. 6, lines 36 – 50], each object managing method representing an algorithm for managing an object used in the apparatus [CacheManager object manages the in-memory objects that are owned by a corresponding persistent container. CacheManager defines methods getCachedEntity(), putCachedEntity(), and removeCachedEntity() that retrieve, store, and delete, respectively, cached entities in the cache; col. 20, lines 13 – 30] and including an accessing method to data stored in an external storage [retrieve, store, and delete, respectively, cached entities in the cache; col. 20, lines 13 – 30]; and

a switching device switching in the component base [ResourceConfig is an abstract extensible class that is contained by the ContainerConfig class. ResourceConfig defines configuration data for a particular type of transactional resource; col. 20, lines 6 – 13], at least one of an object caching part that caches a

persistence object corresponding to data of the external storage [CachedEntityInstance

class is a core class that is used to define an in-memory copy of objects stored in a

particular persistent container; col. 20, lines 13 – 28] using a specified algorithm

[Extending the framework to accommodate a specific type of persistent storage system

defines a "persistent storage environment; col. 17, lines 13 – 23] and an object

persistence processing part performing conversion [mapping] between the data of the

external storage and the persistence object [configuration object contains the class

name of the schema mapping class that provides the logic necessary for performing the

transformation from object schema to relational schema; col. 20, lines 40 – 60], with a

part corresponding to the selected object managing method [CacheManager defines

methods getCachedEntity(), putCachedEntity(), and removeCachedEntity() that retrieve,

store, and delete, respectively, cached entities in the cache; col. 20, lines 13 – 30].

6.   As to claim 13, this is rejected for the same reasons as claim 1 above. As to the

additional limitations, McKeehan teaches a storing device [main memory 820, Fig. 8]

storing schedule information [configuration data] for selecting an object managing

method suitable for a type of a component [ContainerClassConfig is an abstract

extensible class that defines configuration data for classes within a container. It is used

to determine which classes a container supports; col. 20, lines 40 – 60].

7.   As to claim 14, this is a product claim that corresponds to apparatus claim 1; note

the rejection to claim 1 above, which also meets this product claim.

8.   As to claim 15, this is rejected for the same reasons as claim 1 above. As to the

additional limitations, McKeehan teaches managing an object used by the application

program using the part corresponding to the selected object managing method

[PersistentContainer class provides all the necessary interfaces required by the factory

for managing the lifecycle of persistent objects; col. 18, lines 47 – 67].

9.   As to claims 16 and 17, these are rejected for the same reasons as claim 1

above.

10.   As to claim 2, Mckeehan teaches the switching device automatically, generates a

program of the part corresponding to tie selected object managing method, and

incorporates the program in the object managing apparatus [PersistentContainer

passes the ResourceConfig object that is referenced by the ContainerConfig object. The

ResourceConfig class contains both a resource type... and a Resource class; col. 21,

lines 1 – 30].

11.   As to claim 3, McKeehan teaches the switching device [ContainerClassConfig]

selects the part corresponding to the selected object managing method from a part

group that is prepared in advance [a class definition defines how an object acts and

reacts to other objects by defining an operation or set of operations that is/are

performed on the defined data; col. 6, lines 36 – 50], and incorporates the selected part

in the object managing apparatus [PersistentContainer passes the ResourceConfig

object that is referenced by the ContainerConfig object; col. 21, lines 1 – 30].

12.   As to claim 4, Mckeehan teaches the selecting device selects the object

managing method that is designated by a user [would allow a common user interface for

defining virtually any type of persistent storage system; col. 17, lines 23 – 38].

13.   As to claim 5, Mckeehan teaches the selecting device selects the object

managing method that is designated by the application program [common user interface

would greatly ease the burden of programming and maintaining persistent storage

systems; col. 17, lines 23 – 38].

14.   As to claim 6, Mckeehan teaches the selecting device includes an input device

inputting usage information in for component, and selects the object managing method

based on the usage information [capability to define new persistent storage systems

using a simple, easy to use user interface defined by the framework; col. 17, lines 23 –

38].

15.   As to claim 7, Mckeehan teaches the switching device has a cache table caching

an object for each transaction [ContainerStoreConfig objects would define the table or

set of tables occupied by this class in the relational database over which the container is

defined; col. 20, lines 50 – 60], and uses an object caching part that registers an object

in the cache table after a transaction starts [PersistentContainer is responsible for

creating, initializing and registering a Resource object to the corresponding

TransactionManager; col. 20, lines 57 – 67], and clears the cache table when the

transaction terminates, as the part corresponding to the selected object managing

method [the lock state is checked...to both assure the object is not already locked and

to lock the object through the end of the transaction; col. 17, lines 37 – 63].

16.   As to claim 8, Mckeehan teaches the switching apparatus has a cache table

common to all transactions [ContainerStoreConfig objects would define the table or set

of tables occupied by this class in the relational database over which the container is

defined; col. 20, lines 50 – 60], and uses an object caching part which does not clear

the cache table but makes the other transaction use an object on the cache table when

one transaction terminates [PersistentContainer is responsible for creating, initializing

and registering a Resource object to the corresponding TransactionManager; col. 20,

lines 57 – 67], as the part corresponding to the selected object managing method

[ContainerClassConfig is an abstract extensible class that defines configuration data for

classes within a container. It is used to determine which classes a container supports;

col. 20, lines 40 – 60].

17.   As to claim 9, Mckeehan teaches the switching device uses an object caching

part that writes data of an object being used by the application program in the external

storage [retrieve, store, and delete, respectively, cached entities in the cache; col. 20,

lines 13 – 30], and sets next data to the object being used, thereby returning the data to

the application program when the application program requests acquisition of an object

to be processed, as the part corresponding to the selected object managing method

[CacheManager object manages the in-memory objects that are owned by a

corresponding persistent container. CacheManager defines methods getCachedEntity(),

putCachedEntity(), and removeCachedEntity() that retrieve, store, and delete,

respectively, cached entities in the cache; col. 20, lines 13 – 30]

18.   As to claim 10, Mckeehan teaches the switching device uses the object caching

part that caches all data of the external storage in advance before the application

program requests [CachedEntityInstance class is a core class that is used to define an

in-memory copy of objects stored in a particular persistent container; col. 20, lines 13 –

28], an object to be processed, as the part corresponding to the selected object

managing method [ContainerClassConfig is an abstract extensible class that defines

configuration data for classes within a container; col. 20, lines 40 – 60].

19.   As to claim 11, Mckeehan teaches the switching device uses an object caching

part that registers an interface related to the persistence object, and reuses the

interface together with the persistence object [PersistentContainer is responsible for

creating, initializing and registering a Resource object to the corresponding

TransactionManager; col. 20, lines 57 – 67], as the part corresponding to the selected

object managing method.

20.   As to claim 12, McKeehan teaches a designating device designating one or more

data items suitable for the type of the component [ContainerStoreConfig objects would

define the table or set of tables occupied by this class in the relational database over

which the container is defined; col. 20, lines 50 – 60], wherein the switching device uses

an object persistence processing part that performs conversion between data of the

external storage and the persistence object regarding designated data items of the

persistence object [configuration object contains the class name of the schema mapping

class that provides the logic necessary for performing the transformation from object

schema to relational schema; col. 20, lines 40 – 60], as the part corresponding to the

selected object managing method.

Conclusion

21.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

<div style="text-align: right;">
Li B. Zhen
Examiner
Art Unit 2126
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lbz
May 20, 2004

MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100